

# Work Order ID 59120

Wednesday, May 26, 2010 1:25:15 PM



Page 1

Item ID: D3500-1

Accept

Revision ID:

Item Name: Saddle

Start Date: 5/26/2010 Start Qty: 8.00

Required Date: 6/4/2010 Req'd Qty: 8.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date: 10-5-26 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

100



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

0.00

Memo

0.00

Program Batch No. 389120 Double check by: ☐ 1-Machine Step No  
per Folio FA641 and inspect per attached Dimension Sheets ☐ 2-Machine Step  
No 2 per Folio FA641 and inspect per attached Dimension Sheets ☐ 3-Machine  
Step No 3 per Folio FA641 and inspect p

10-6-23

8

1

110



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

10-6-23

8

1

120



QC

Quality Control

QC8- Inspect parts - second check

0.00

Memo

0.00

10-6-23

8

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3500-1 PAR #: \_\_\_\_\_ Fault Category: machining NCR: Yes No DQA: \_\_\_\_\_ Date: 10.07.08  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: \_\_\_\_\_ Date: 10.07.08

NCR: <u>59120</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>10.6.23</u>	<u>#100</u>	<u>WISTAKEN OFFSET VALVE INPUT. CUTTING TOOL TOO LONG WRECKING THE WORKPIECE BEYOND REPAIR.</u>	<u>P</u> <u>10.06.23</u> <u>OSJHL</u>	<u>SCRAP + REPLACE</u> <u>Qty +1 B 41962</u>	<u>P</u> <u>10.6.23</u>	<u>S</u> <u>10/06/03</u>	<u>P</u> <u>10.06.23</u> <u>OSJHL</u>	<u>S</u> <u>10/06/03</u>
		<u>PL...operator error</u>						

NOTE: Date & initial all entries

# Work Order ID 59120

Wednesday, May 26, 2010 1:25:15 PM



Page 2

Item ID: D3500-1

Accept

Revision ID:

Item Name: Saddle

Start Date: 5/26/2010 Start Qty: 8.00

Required Date: 6/4/2010 Req'd Qty: 8.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

140

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME:

320° FINISH TIME:

COVEN TEMPERATURE:

8:45

9:15

8 BL 10-6-25

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

m 10 06 25 (8)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 59120**

Wednesday, May 26, 2010 1:25:15 PM

Page 3

Item ID: D3500-1

Revision ID:

Item Name: Saddle

Start Date: 5/26/2010 Start Qty: 8.00

Required Date: 6/4/2010 Req'd Qty: 8.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

Identify as per dwg & Stock Location: 424

0.00



Packaging

Memo

0.00

Packaging

10-6-25

170

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/06/28

CZ 10/6/25

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, May 26, 2010 1:25:20 PM

Page 1

Work Order ID: 59120

Parent Item: D3500-1

Parent Item Name: Saddle

Comments: IPP Rev:A New Issue 06-06-15 JLM

Start Date: 5/26/2010

Required Date: 6/4/2010

Start Qty: 8.00

Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6102-013 Saddle Billet		Manufactured	No			100	Each	1.0000	1	8			

Location

MAT43

41962

Loc Qty

1

1

Loc Code

10.6.23

~~8~~ + 1 (1 scrap)  
8 59467

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	59120
<b>Description:</b> Saddle		<b>Part Number:</b>	D3500-1
<b>Inspection Dwg:</b> D3500	<b>Rev:</b> C	<b>Page 1 of 1</b>	

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.483	0.490		.485	.485	.485	.485		
B	1.175	1.185		1.180	1.180	1.180	1.180		
C	3.145	3.155		3.150	3.150	3.150	3.150		
D	1.175	1.185		1.180	1.180	1.180	1.180		
E	0.365	0.385		.375	.375	.375	.375		
F	0.490	0.510		.500	.500	.500	.500		
H									
I	R1.575	R1.595		1.590	1.590	1.590	1.590		
J	0.240	0.260		.245	.245	.245	.245		
K	0.490	0.510		.502	.502	.502	.502		
L	3.590	3.650		3.625	3.625	3.625	3.625		
M	0.315	0.322		.320	.320	.320	.320		
N	0.256	0.262		.258	.258	.258	.258		
O	6.500	6.520		6.510	6.510	6.510	6.510		
P	5.990	6.010		6.000	6.000	6.000	6.000		
Q	2.820	2.830		2.823	2.823	2.823	2.823		
R	2.495	2.505		2.498	2.498	2.498	2.498		
S	2.245	2.255		2.250	2.250	2.250	2.250		
T	1.120	1.130		1.125	1.125	1.125	1.125		
U	0.540	0.560		.545	.545	.545	.545		
V	0.793	0.803		.798	.798	.798	.798		
W	R.240	R.260		.250	.250	.250	.250		
X	0.040	0.060		.060	.060	.060	.060		
Y	0.100	0.120		.100	.100	.100	.100		
AA	R1.125	R1.145		1.140	1.140	1.140	1.140		
AB	R.490	R.510		.500	.500	.500	.500		
AC	0.615	0.635		.625	.625	.625	.625		
AD	0.240	0.260		.245	.245	.245	.245		
AE	1.810	1.830		1.820	1.820	1.820	1.820		
AF	0.240	0.260		.250	.250	.250	.250		
AG	0.140	0.160		.152	.152	.152	.152		
AH	0.140	0.160		.147	.147	.147	.147		
AI	0.140	0.160		.155	.155	.155	.155		
Accept/Reject									

Measured by: *MP*  
Date: 10-6-22

Audited by: *DTJ*  
Date: 10/06/23

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)					
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 59120
<b>Description:</b> Saddle		<b>Part Number:</b> D3500-1
<b>Inspection Dwg:</b> D3500	<b>Rev:</b> C	<b>Page:</b> 1 of 1

22

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.483	0.490		.485	.485	.485	.485		
B	1.175	1.185		1.180	1.180	1.180	1.180		
C	3.145	3.155		3.150	3.150	3.150	3.150		
D	1.175	1.185		1.180	1.180	1.180	1.180		
E	0.365	0.385		.375	.375	.375	.375		
F	0.490	0.510		.500	.500	.500	.500		
H									
I	R1.575	R1.595		1.590	1.590	1.590	1.590		
J	0.240	0.260		.245	.245	.245	.245		
K	0.490	0.510		.502	.502	.502	.502		
L	3.590	3.650		3.625	3.625	3.625	3.625		
M	0.315	0.322		.320	.320	.320	.320		
N	0.256	0.262		.258	.258	.258	.258		
O	6.500	6.520		6.510	6.510	6.510	6.510		
P	5.990	6.010		6.000	6.000	6.000	6.000		
Q	2.820	2.830		2.823	2.823	2.823	2.823		
R	2.495	2.505		2.498	2.498	2.498	2.498		
S	2.245	2.255		2.250	2.250	2.250	2.250		
T	1.120	1.130		1.125	1.125	1.125	1.125		
U	0.540	0.560		.545	.545	.545	.545		
V	0.793	0.803		.798	.798	.798	.798		
W	R.240	R.260		.250	.250	.250	.250		
X	0.040	0.060		.060	.060	.060	.060		
Y	0.100	0.120		.100	.100	.100	.100		
AA	R1.125	R1.145		1.140	1.140	1.140	1.140		
AB	R.490	R.510		.500	.500	.500	.500		
AC	0.615	0.635		.625	.625	.625	.625		
AD	0.240	0.260		.245	.245	.245	.245		
AE	1.810	1.830		1.820	1.820	1.820	1.820		
AF	0.240	0.260		.250	.250	.250	.250		
AG	0.140	0.160		.152	.152	.152	.152		
AH	0.140	0.160		.147	.147	.147	.147		
AI	0.140	0.160		.155	.155	.155	.155		
Accept/Reject									

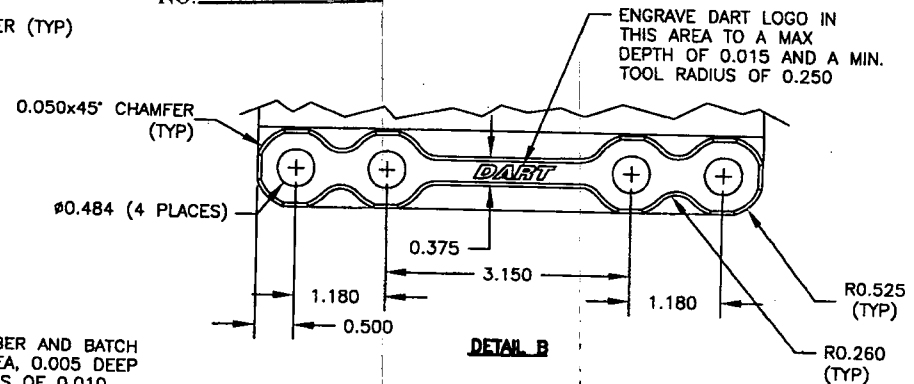
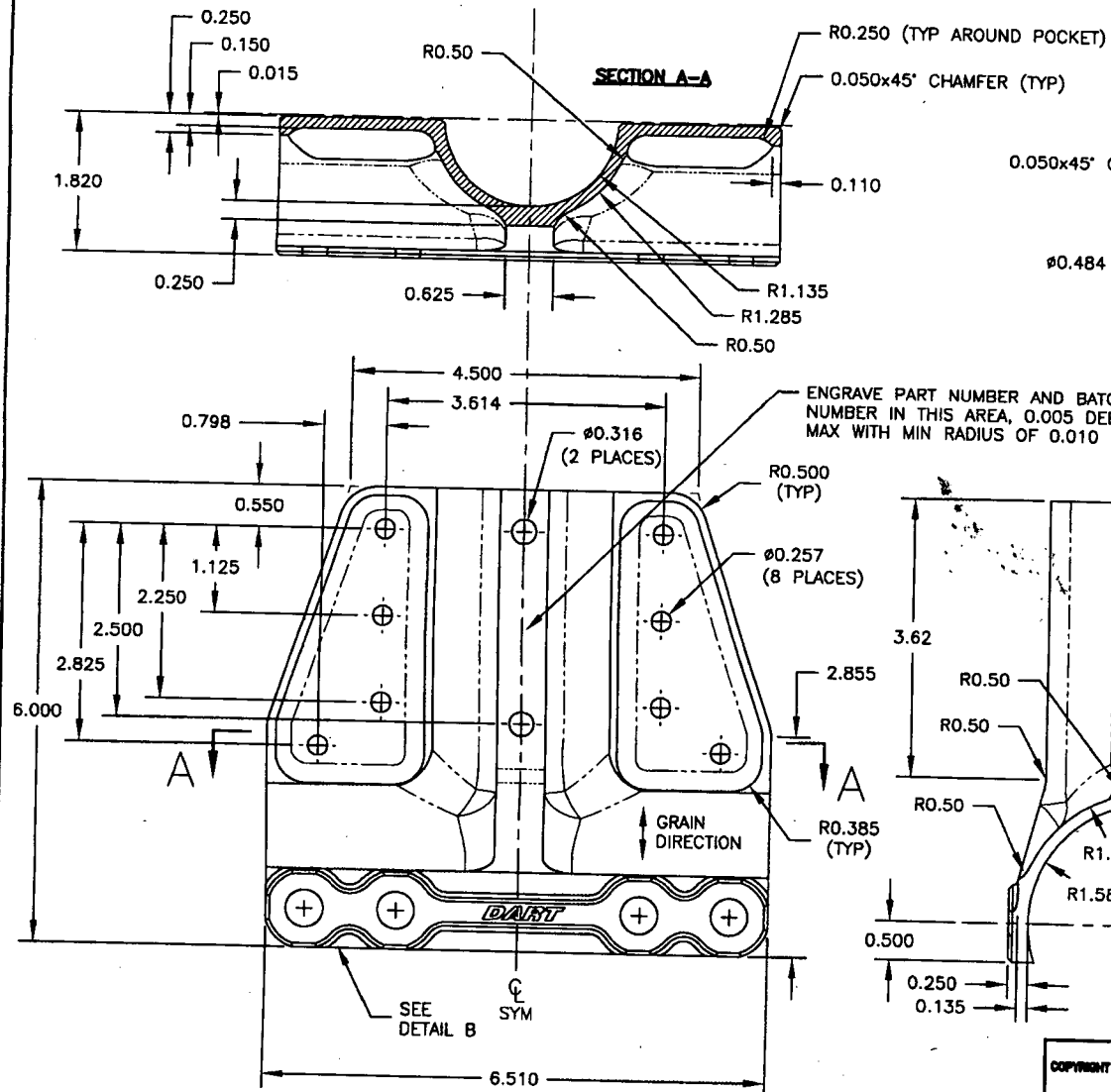
Measured by: <i>[Signature]</i>
Date: 10.6.23

Audited by: <i>[Signature]</i>
Date: 10/06/23

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	<i>[Signature]</i>

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

WITHOUT NOTICE  
WORK ORDER  
NO. 39120



### D3500-1 SADDLE

- 1) MATERIAL: 6061-T6/T651 (QQ-A-200/8 OR QQ-A-250/11)  
(MAKE FROM D6102-013 SADDLE BILLET, 6061)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1,  
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER  
DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

RELEASED

06.08.15.11

C	06.06.30	MAT'L NOW 6061-T6/T651
B	06.05.29	CHANGE DIMS; MAT'L NOW 7075-T7351
A	06.04.18	NEW ISSUE
DESIGN	92	DRAWN BY PH
CHECKED	#	APPROVED #
DATE	06.06.30	TITLE SADDLE
DRAWING NO. D3500		REV. C
DART AEROSPACE LTD.		SHEET 1 OF 1
HARRISBURG, ONTARIO, CANADA		SCALE 2:3

COPYRIGHT © 2006 BY DART AEROSPACE LTD.  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL  
AND IS SUPPLIED ON THE EXPRESS CONDITION  
THAT IT IS NOT TO BE USED FOR ANY PURPOSE  
OR COPIED OR COMMUNICATED TO ANY OTHER  
PERSON WITHOUT WRITTEN PERMISSION FROM  
DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries